

CLAIMS

What is claimed is:

1. (Original) A method comprising:
 - preparing capability information of each of a plurality of devices with regard to signal formats, said capability information including receive, transmit and conversion capabilities for each of the plurality of devices with regard to signal formats;
 - designating a device that ultimately receives a signal;
 - collecting and storing the capability information of every one of the plurality of devices by a central controller in one of said plurality of devices;
 - producing a plurality of possible transmission paths between the receiving device and other devices based on the capability information collected and stored;
 - identifying a device that transmits a signal and a format of the transmitted signal by monitoring a signal format field in said signal to determine whether to process said signal; and
 - selecting one of the plurality of possible transmission paths that matches the transmitting device and the transmitted signal format for a transmission path.
2. (Original) The method of claim 1, wherein
 - the possible transmission paths are specified in terms of the order of devices involved in the transmission paths and a signal format between the devices involved.
3. (Original) The method of claim 1, wherein the producing step comprises:
 - seeking other devices capable of transmitting a signal in the same formats as the receiving device is capable of receiving.

4. (Original) The method of claim 2, wherein
the producing step comprises
seeking other devices that are capable of converting a signal into the
formats that the receiving device is capable of receiving;
ordering the converting devices before the receiving device;
seeking other devices that are capable of transmitting a signal in the format
that the converting devices are capable of converting from; and
ordering the transmitting devices before the converting devices.
5. (Original) The method of claim 1, wherein
the capability information for each of the plurality of devices is originally
possessed in each of the plurality of devices.
6. (Original) The method of claim 5, wherein
the plurality of devices communicate with each other to collect the
capability information.
7. (Original) The method of claim 1, further comprising:
displaying the selected transmission path on a monitor (305).
8. (Original) The method of claim 7, wherein said displaying step comprises
displaying connection instructions on the monitor (305).
9. (Original) A method comprising:
preparing capability information of each of a plurality of devices with
regard to signal formats, said capability information including receive, transmit
and conversion capabilities for each of the plurality of devices with regard to
signal formats;
designating a device that ultimately receives a signal;
collecting and storing the capability information of every one of the
plurality of devices by a central controller in one of said plurality of devices;
producing a plurality of possible transmission paths between the receiving
device and other devices based on the capability information collected and stored;

identifying a device that transmits a signal and a format of the transmitted signal by monitoring a signal format field in said signal to determine whether to process said signal;

selecting one of the plurality of possible transmission paths that matches the transmitting device and the transmitted signal format for a transmission path; displaying the selected transmission path on a monitor (305); and displaying connection instructions on the monitor (305).

10. (Original) The method of claim 9, wherein

the possible transmission paths are specified in terms of the order of devices involved in the transmission paths and a signal format between the devices involved.

11. (Original) The method of claim 9, wherein the producing step comprises: seeking other devices capable of transmitting a signal in the same formats as the receiving device is capable of receiving.

12. (Previously Amended) The method of claim 9, wherein the producing step comprises seeking other devices that are capable of converting a signal into the formats that the receiving device is capable of receiving; ordering the converting devices before the receiving device; seeking other devices that are capable of transmitting a signal in the format that the converting devices are capable of converting from; and ordering the transmitting devices before the converting devices.

13. (Original) The method of claim 9, wherein the capability information for each of the plurality of devices is originally possessed in each of the plurality of devices.

14. (Original) The method of claim 13, wherein the plurality of devices communicate with each other to collect the capability information.